

ABSTRACT

1 A magnetic field sensor including an amplifier and a
2 magnetic field element for outputting a signal to a switch
3 circuit according to the strength of an applied magnetic
4 field. The switch circuit outputs a signal selected by an
5 external two-phase signal to an amplifier that amplifies
6 the signal and outputs a resulting voltage to a first end
7 of a memory element. A switch, having one end connected to
8 a second end of the memory element, is controlled by the
9 two-phase signal. The switch closes in a first phase of
10 the two-phase signal causing the memory element to store
11 the output voltage of the amplifier, and opens in a second
12 phase causing a vector sum of the output voltage the
13 amplifier to be stored in the memory element and providing
14 the output voltage to a signal output terminal connected to
15 the second end of the memory element.